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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/755,285

01/04/2001

William Joshua Price

M-9949 US

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11/18/2003

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SAN JOSE, CA 95134

EXAMINER

RIOS CUEVAS, ROBERTO JOSE

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/755,285

Applicant(s)

PRICE, WILLIAM JOSHUA

Examiner

Roberto J Rios

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5,7 and 9-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7 and 9-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Byers et al (5,422,915).

As per claim 1, AAPA (page 2, line 15) teaches that RAID arrays are housed in disk enclosures, wherein devices such as disk drives within said enclosures run off power supplies but does not specifically disclose the claimed power domain arrangement. However, Byers et al (herein after Byers) teach a data storage array comprising a first power domain consisting of a plurality of data storage means being powered by a first group of current sharing power supplies, a second power domain consisting of a plurality of data storage means being powered by a second group of current sharing power supplies (Figure 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's RAID array with Byers power domains arrangement for the purpose of providing security against voltage loss and ensure data integrity.

3. Claims 5, 7 and 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Byers, and further in view of Wiscombe et al (US patent 5,668,417).

As per claim 5, AAPA in view of Byers teaches a power domain arrangement but fails to disclose the claimed shared power domain. However, Wiscombe et al (herein after Wiscombe) teach two separate power supplies, wherein a power circuit is provided to provide shared power to a third plurality of elements for said two power supplies (Figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers power domains arrangement with Wiscombe's shared power domain for the purpose of ensuring standby power if either one of the power sources fail.

As per claims 10 and 11, AAPA in view of Byers and Wiscombe teaches the claimed power domain arrangement including the third shared power domain but fails to provide a fourth shared power domain. However, it is been held that there is no invention in duplicating parts or components to provide a multiplied effect. In the instant case, Wiscombe already teaches the obviousness of providing a separate shared power domain receiving power from tow separate power sources and outputting shared power to third and separate elements. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe as a matter of engineering design to provide multiple shared power domains for the purpose of ensuring standby power to multiple elements if either one of the power sources fail.

As per claims 7 and 12, AAPA in view of Byers and Wiscombe teaches the claimed circuit except providing a fuse. However, the Examiner takes official notice that it is well known in the power redundancy art to provide a diode in series with a fuse.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's such that a fuse is included in the power circuit for the purpose of providing load isolation from an overvoltage condition.

As per claim 9, Byers teaches a backup power source but does not specifically disclose using a battery. However, the Examiner takes official notice that backup batteries are well known in the power redundancy art.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's such that a backup battery is provided for the purpose of providing auxiliary DC power in case of a faulty power source.

As per claims 13-16, AAPA teaches that the claimed elements are housed within RAID arrays disk enclosures. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's such that different elements are selectively grouped together for the purpose of providing power redundancy among said elements.

4. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Byers and Wiscombe as applied to claim 16 above, and further in view of White (US patent 6,260,079).

As per claims 17 and 20, AAPA teaches a RAID array but does not specifically disclose the claimed port bypass circuit. However, White teaches a disk drive array (Figures 12, 13B) comprising a backplane controller coupled to a port bypass circuit operable to bypass a disk drive (\*col. 20, line 64; col. 21, line 25)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's such that a bypass port circuit is provided for the purpose of bypassing any disk drive element for hot-swapping purposes.

As per claim 18, AAPA in view of Byers and Wiscombe teaches the claimed power domain arrangement including the third shared power domain but fails to provide a fourth shared power domain. However, it is been held that there is no invention in duplicating parts or components to provide a multiplied effect. In the instant case, Wiscombe already teaches the obviousness of providing a separate shared power domain receiving power from tow separate power sources and outputting shared power to third and separate elements. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe as a matter of engineering design to provide multiple shared power domains for the purpose of ensuring standby power to multiple elements if either one of the power sources fail.

AAPA in view of Byers and Wiscombe teaches the claimed circuit except providing a fuse. However, the Examiner takes official notice that it is well known in the power redundancy art to provide a diode in series with a fuse.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's such that a fuse is included in the power circuit for the purpose of providing load isolation from an overvoltage condition.

As per claims 19 and 21, AAPA teaches that the claimed elements are housed within RAID arrays disk enclosures and run off power supplies. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify AAPA's in view of Byers and Wiscombe's as a matter of engineering design such that different elements are selectively grouped together for the purpose of providing power redundancy among said elements.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 5, 7 and 9-21 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Communication with PTO**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax number for Before-Final communications and After-Final communications is (703) 872-9306.



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